



**Billing Code 6355-01-P**

**CONSUMER PRODUCT SAFETY COMMISSION**

**16 CFR Parts 1112 and 1227**

**Docket No. CPSC-2013-0019**

**Safety Standard for Carriages and Strollers**

**AGENCY:** Consumer Product Safety Commission.

**ACTION:** Final rule.

**SUMMARY:** The Danny Keysar Child Product Safety Notification Act, section 104 of the Consumer Product Safety Improvement Act of 2008 (CPSIA), requires the United States Consumer Product Safety Commission (Commission or CPSC) to promulgate consumer product safety standards for durable infant or toddler products. These standards are to be “substantially the same as” applicable voluntary standards or more stringent than the voluntary standards if the Commission concludes that more stringent requirements would further reduce the risk of injury associated with the products. The Commission is issuing a safety standard for carriages and strollers in response to the direction under Section 104(b) of the CPSIA.

**DATES:** The rule is effective on September 10, 2015. The incorporation by reference of the publication listed in this rule is approved by the Director of the *Federal Register* as of September 10, 2015.

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**SUPPLEMENTARY INFORMATION:**

## **A. Background and Statutory Authority**

The Consumer Product Safety Improvement Act of 2008 (CPSIA, Pub. L. 110-314) was enacted on August 14, 2008. Section 104(b) of the CPSIA, part of the Danny Keysar Child Product Safety Notification Act, requires the Commission to: (1) examine and assess the effectiveness of voluntary consumer product safety standards for durable infant or toddler products, in consultation with representatives of consumer groups, juvenile product manufacturers, and independent child product engineers and experts; and (2) promulgate consumer product safety standards for durable infant and toddler products. These standards are to be “substantially the same as” applicable voluntary standards or more stringent than the voluntary standards if the Commission concludes that more stringent requirements would further reduce the risk of injury associated with the products.

On May 20, 2013, the Commission issued a notice of proposed rulemaking (NPR) for carriages and strollers. 78 FR 29279. The NPR proposed to incorporate by reference the voluntary standard, ASTM 833-13, “Standard Consumer Safety Performance Specification for Carriages and Strollers,” with certain changes to provisions in the voluntary standard to strengthen the ASTM standard.

In this document, the Commission is issuing a safety standard for carriages and strollers. As required by Section 104(b)(1)(A), the Commission consulted with manufacturers, retailers, trade organizations, laboratories, consumer advocacy groups, consultants, and members of the public in the development of this proposed standard, largely through the ASTM process. The rule incorporates by reference the most recent voluntary standard developed by ASTM International (formerly the American Society for Testing and Materials), ASTM F833-13b, “Standard Consumer Safety Performance Specification for Carriages and Strollers” (ASTM

F833-13b), with a modification to address head entrapment hazards associated with multi-positional/adjustable grab bars.

## **B. Product Description**

The term “durable infant or toddler product” is defined in section 104(f)(1) of the CPSIA as a durable product intended for use, or that may be reasonably expected to be used, by children under the age of 5 years. “Strollers” are specifically identified in section 104(f)(2)(I) of the CPSIA as a durable infant or toddler product. ASTM F833-13b defines a “stroller” as a wheeled vehicle to transport children usually from infancy to 36 months of age. Children are transported generally in a sitting-up or semi-reclined position. The motive power is supplied by a person while pushing on a handle attached to the stroller. Carriages, on the other hand, are wheeled vehicles to transport an infant, usually in a lying down position. Thus, the principal difference between strollers and carriages is the position of the occupant. Both carriages and strollers may be capable of being folded for storage.

Umbrella strollers are lightweight, compact when folded, and may lack certain accessories, such as baskets underneath the seat, or cup holders for the caregiver. Strollers that fold in two dimensions, the height and length, are called “2D” strollers. Strollers that collapse in all three dimensions—height, length, and width—resulting in a smaller folded package than 2D strollers, are called “3D” strollers. Other types of strollers include travel systems that accommodate an infant car seat on a stroller. Strollers intended to be used at a jogging rate are called “jogging strollers.” Some products can be used as strollers and carriages (convertible carriages/strollers). Convertible carriages or strollers are intended to be converted by the owner to be used as a carriage or a stroller. Some strollers incorporate automatic or assisted folding and

unfolding mechanisms. All of these carriages and strollers fall within the scope of ASTM F833-13b.

### **C. Market Description**

The majority of carriages/strollers are produced and/or marketed by juvenile product manufacturers and distributors. Currently, there are 85 known suppliers of carriages/strollers to the U.S. market. Thirty-four are domestic manufacturers, 36 are domestic importers, and four are domestic firms with unknown supply sources. In addition, 10 foreign firms supply strollers to the U.S. market: seven foreign manufacturers, one firm that imports products from foreign companies and distributes them from outside of the United States, one foreign retailer that ships directly to the United States, and one firm with an unknown supply source. There is an additional manufacturer whose size and location we could not determine.

According to a 2005 survey conducted by the American Baby Group (*2006 Baby Products Tracking Study*), nearly all new mothers (99 percent) own at least one stroller. Applying this information to Centers for Disease Control and Prevention (CDC) birth data indicates that nearly 4 million strollers are owned by new mothers. Approximately 26 percent of those strollers were handed down or purchased secondhand, according to the *2006 Baby Products Tracking Study*. Thus, about 74 percent of strollers were acquired new, and approximately 3 million strollers are sold to households annually ( $.99 \times .74 \times 4$  million births per year). Strollers can cost between \$20 to \$700, depending upon the type and brand of stroller. On average, umbrella strollers tend to be the least expensive (around \$25–\$50 for the least costly versions); and most other strollers cost around \$150–\$300, with many carriages, travel systems, and jogging stroller costs running in the \$500–700 range.

### **D. Incident Data**

The preamble to the NPR summarized the incident data reported to the Commission from January 1, 2008 through December 31, 2012, involving strollers. 78 FR 29281. In the NPR CPSC's Directorate for Epidemiology staff identified four stroller-related fatalities. In addition, 1,203 stroller-related nonfatal incidents, 359 of which resulted in injuries, were reported during that time period.

The hazard patterns identified in the NPR included issues with wheels, parking brakes, lock mechanisms, restraints, hinges, structural integrity, stability/tip-over, clearance, car seat attachment, canopies, handlebars, seats, sharp points or edges, trays, and unspecified or miscellaneous problems. Since the NPR, 90 new incidents related to carriages and strollers were reported to the Commission between January 1, 2013 and June 30, 2013; these incidents reportedly occurred between January 1, 2008 and June 30, 2013. There were no new fatal incidents reported. Out of the 90 new incidents, 32 stroller-related, nonfatal injuries were reported. Thus, the total number of incidents reported from January 1, 2008 through June 30, 2013, increased to 1,297 incidents, including 4 fatalities, and 391 injuries.

The hazard patterns identified among the 90 new incidents were similar to the ones identified in the NPR. Wheel problems accounted for 25 of the 90 new incidents, which resulted in six injuries. Lock mechanical failures resulted in 11 incidents, causing five injuries. Ten incidents, resulting in three injuries, arose from stability issues. Restraints were associated with two injuries and eight noninjury incidents.

Of the 90 new incidents, four incidents required hospitalization. Two incidents resulted in finger amputations, one that occurred when a child's finger got caught in the folding hinge; the second finger amputation occurred when a stroller collapsed. The third hospitalization involved a child unbuckling the restraints, attempting to leave the stroller, and getting caught on

the extended rivet used to latch the folded stroller; this incident caused a laceration to the crotch area. The fourth hospitalization resulted from a stroller rolling off a train platform and falling onto the tracks with the child in the stroller, causing a cut on the child's forehead.

The NPR also noted 78 reported stroller incidents that involved children older than 4 years of age and adults. Out of the 78 incidents, 72 involved victims between 17 and 64 years of age. Almost all of the incidents (74 out of 78) resulted in injuries, mostly to the fingers. Six new incidents were reported from January 1, 2013 to June 30, 2013, for a total of 84 stroller incidents. Based on the narratives provided, all six new incidents involved children older than 4 years of age or adults, and the six incidents each resulted in finger injuries.

## **E. Overview of ASTM F833**

ASTM first published a consumer product safety standard for carriages and strollers in 1983. ASTM F833, "Standard Consumer Safety Performance Specification for Carriages and Strollers," established safety performance requirements, test methods, and labeling requirements to minimize the hazards to children presented by carriages and strollers. ASTM F833 has been revised more than 20 times. The current standard, ASTM F833-13b, was approved on November 1, 2013.

### **1. Proposed Rule**

In the NPR, the Commission proposed to incorporate ASTM F833-13, which addressed many of the hazards patterns identified for strollers. Among other requirements, ASTM F833-13 provided:

- an improved test method for the parking brake requirement;
- a new requirement and test method to address head entrapment hazards associated with car seats on a stroller (combination unit);

- a new requirement, test method, and warnings to address wheel and swivel assemblies' detachments;
- an improved test method for latching and locking mechanisms;
- a new requirement and test method to address the scenario of the child releasing the buckle of the restraint system and a clarification on the buckle closing system;
- a new requirement and test method to address pinching, shearing, and scissoring at the saddle hinge link on 3D fold strollers;
- a new requirement and test method to address pinching, shearing, and scissoring at the canopy hinges;
- an improved requirement and test method to address stability issues by taking into account multiple seats facing different directions, such as rotating seats;
- a new requirement and test method to address a strangulation hazard associated with cords and straps within the occupant space; and
- warning label clarifications.

In the NPR, the Commission also proposed a performance requirement and test method to address scissoring, shearing, and pinching hazards associated with 2D fold strollers, which were already required for 3D fold strollers. The Commission noted that hinge issues caused the highest injury rate of any stroller hazard category (75 incidents, resulting in 72 injuries). Most of the hinge-related injuries resulted from scissoring, pinching, or shearing at the hinge link of 2D and 3D fold strollers. Most of the incidents occurred when a caregiver was unfolding the stroller for use and the child was climbing into the stroller. Reported injuries involved pinched, lacerated, or amputated fingers or arms, including one hospitalization for reattachment of a finger. For testing of the 2D fold stroller and convertible carriage/strollers, the Commission

proposed a test within an access zone based on the incident data and the anthropometric dimensions of a child occupant. The Commission also proposed a test method to test the frame folding action of a stroller while the stroller is moved from the completely folded to the completely erect position and from the partially folded position to the fully erect and locked position (travel distance calculation).

## **2. Current ASTM Standard for Carriages and Strollers (ASTM F833-13b)**

ASTM adopted the performance requirement and test method proposed by the Commission in a subsequent version of the ASTM standard, ASTM F833-13a, to address scissoring, shearing, and pinching hazards associated with 2D fold strollers. ASTM approved ASTM F833-13a on September 15, 2013. On November 1, 2013, ASTM approved the current version of the standard, ASTM F833-13b, which adopts the performance requirement and test method for 2D fold strollers, with a modification to the travel distance calculation to test for scissoring, shearing, and pinching.

In this rule, the Commission incorporates by reference ASTM F833-13b because the Commission's proposed modifications in the NPR have been adopted in ASTM F833-13b, including the requirements and test methods for 2D fold strollers to address hazards associated with scissoring, shearing, and pinching. Specifically, ASTM F833-13b provides a definition of a "2D fold stroller" as a stroller that folds the handlebars and leg tubes only in the front-to-back (or back-to-front) direction. To address the 2D fold stroller hazards, ASTM F833-13b requires the frame folding action of a 2D fold stroller and convertible carriage/stroller to be designed and constructed to prevent injury from scissoring, shearing, or pinching. Scissoring, shearing, or pinching that may cause injury exists when the edges of the rigid parts admit a 0.210-in (5.33-mm) diameter probe but do not admit a 0.375-in (9.53-mm) diameter probe when tested.



However, units with a removable seat that prevents the complete folding of unit when still attached are exempt from this requirement.

ASTM F833-13b also provides a test method for 2D frame strollers to address folding scissoring, shearing, and pinching. In the NPR, the Commission proposed a test method for scissoring, shearing, and pinching hazards that may occur while moving the stroller from a completely folded and partially folded position to the fully erect and locked position. The test proposed in the NPR calculated the travel distance based on the distance between front and rear wheels in an open position and in a closed position. ASTM F833-13b modified the travel distance calculation for the test. The modified test shows the travel distance based on the distance between front and rear wheels only in an open position. ASTM's rationale for the test explains that products are evaluated for the last 1/3 of travel for a predefined access zone because the last 1/3 of travel is considered the most hazardous condition, where a seated child's hand may be vulnerable to scissoring, shearing, and pinching within the access zone while the caregiver is preoccupied with the final stages of erecting the stroller.

CPSC staff compared both methods of the calculation, using various strollers, including strollers involved in incidents. Although in certain strollers the total amount of travel distance to be tested would be less than the travel distance proposed in the NPR, CPSC staff's review showed that the revised test method would be less burdensome and would provide an equal degree of safety as the travel distance calculation proposed in the NPR. According to CPSC staff, under the revised travel distance calculation, the most critical part of the frame folding associated with the incidents will be tested for scissoring, shearing, or pinching. Because the revised test is simpler to use, and because the reduction in travel distance does not make the test

less effective, the Commission incorporates by reference ASTM F833-13b with the revised travel distance calculation.

## **F. Response to Comments**

The Commission received six comments from manufacturers, consumer advocacy groups, and trade associations in response to the NPR. A summary of each comment topic and response is provided. In general, all of the commenters support the mandatory standard for carriages and strollers.

### **1. 2D Fold Stroller Test**

**Comment:** One manufacturer recommended simplifying the test method that was included in the NPR, as outlined in section 7.18.2 *for units where the front and rear wheels move toward each other during folding*, to address scissoring, shearing, and pinching hazards for 2D frame fold strollers. The commenter proposed determining the starting point for the stroller test by beginning at 2/3 the distance between the front and rear wheel axles in an open position of the stroller. The commenter stated that the ASTM subcommittee was working to include this starting point definition in the next revision and requested that the Commission review and adopt the change to the test method once the requirement is approved by the ASTM subcommittee.

**Response:** ASTM has revised the travel distance calculation in ASTM F833-13b. CPSC staff compared the travel distance calculation test proposed in the NPR and the modified test in ASTM F833-13b, using various strollers, including certain incident strollers. CPSC staff's review showed that the revised test is simpler, but the revised test will still test the most critical part of the frame folding associated with the incidents. Accordingly, the Commission will adopt ASTM F833-13b with the revised travel distance calculation because the hazards identified by

CPSC staff (scissoring, shearing, and pinching hazards in 2D fold strollers) will be addressed adequately by the test in ASTM F833-13b.

## **2. 2D Fold Stroller Access Zone**

**Comment:** A commenter suggested an exemption to the 2D fold stroller test procedure, if there is a cover over the hinge that is within the access zone; for example, a stroller hinge that has a cover over the top and sides of the hinge, but the bottom is left open to allow the frame members to rotate during folding. The only way to access the hinge would be to come up from underneath or behind through the rear of the stroller, which would not be possible if a child is sitting in the stroller or standing on the side of the stroller. According to the commenter, the ASTM subcommittee is currently reviewing an additional requirement to assess at what point a covering on a hinge is sufficient protection from the 2D frame fold pinch hazard. The commenter requested that the Commission review and adopt the additional requirement once the additional requirement is approved by the ASTM subcommittee.

**Response:** As discussed in the preamble, ASTM 833-13b now addresses hazards associated with frame fold hinges for both 2D fold strollers and 3D fold strollers, regardless of the direction of entry, to reduce the risk of finger injury to a child who is sitting or is about to sit in a stroller. CPSC staff believes that there are many factors, including the size, shape, and material properties of the cover that may hinder the cover's effectiveness. Without more information about protective covers and how they would be used, the Commission will not provide an exemption for such covers without further review and testing. However, if ASTM subsequently publishes a standard to include a protective cover exemption, ASTM can notify the Commission of the revision, and the Commission would consider the revision at that time.

## **3. Combined Braking and Stability Test**

**Comment:** A commenter suggested that the Commission adopt the combined braking and stability test that Consumer Reports uses in its testing. The commenter stated that the test evaluates both brake efficacy and stability in various orientations on an incline of 20°—as opposed to 12.° In addition, the commenter states that the brake standard should assess how easy it is to engage the brake, and reliably tell if the brake is engaged.

**Response:** The parking brake requirements were improved significantly in the ASTM F833-13 version of the standard to approximate the force that is applied to the parking brake, if the 12° inclined plane was increased to 20.° ASTM F833-13 also included an improved requirement and test method for multiple seats facing different directions, such as rotating seats, to address stability issues. These requirements are included in ASTM F833-13b. Therefore, the Commission finds that the requirements in ASTM F833-13b are adequate to address the hazards associated with parking brakes and stability issues and do not require additional requirements at this time.

#### **4. Irregular Surface Test**

**Comment:** Two commenters suggested that the Commission adopt the Irregular Surface Test in EN 1888:2012. The commenters stated that the irregular surface test is a durability test that evaluates the strollers for the expected lifetime of the product.

**Response:** ASTM F833-13 included improved parking brake, stability, wheel detachment, and locking mechanism requirements that address the hazards associated with the structural issues identified in the incident data. These requirements are included in ASTM F833-13b. CPSC staff's review of fatigue tests, such as the irregular surface test, indicates that such tests are time-consuming (and costly) and that tests with lower repetitions and higher weights/forces yield

substantially similar results. Accordingly, the Commission will not require the irregular surface test at this time.

## **5. Passive Containment/Clearance**

**Comment:** One commenter recommended that the standard's passive containment/foot opening test method be augmented with a requirement that any adjustable part, such as an adjustable grab bar or a car seat adapter that remains in the stroller, be tested in all possible use positions.

**Response:** The Commission agrees that the test for passive containment/foot opening should be improved. An adjustable (or multi-positional) grab bar can adjust to suit the height of the child to increase comfort while holding the bar. However, adjustable grab bars may be left in an unsafe position, resulting in a potentially fatal head entrapment between the grab bar and the seat because the consumer may have difficulty discerning visually the difference between certain positions of the grab bar, such as the car seat position and the occupant-use position. CPSC staff is aware of earlier model year strollers that had adjustable grab bars, as described by the commenter. Of the four stroller-related fatalities from January 1, 2008 through December 31, 2012, one incident involved a 5-month-old infant whose head became entrapped between the seat and tray. Therefore, the Commission believes that the opening between the seat and the tray or the seat and grab bar could lead to a potentially fatal head entrapment hazard.

Currently, the test method for passive containment/foot opening in ASTM F833-13b provides under 7.12 Passive Containment/Foot Opening Test Method the following steps: Secure the front wheels of the unit in their normal standing position so that the unit cannot move forward. Attach the tray(s) or grab bar(s) in the position that creates the bounded opening(s). Per the manufacturer's instructions, position any adjustable features (that is, calf supports, foot rests, etc.) that may affect the bounded opening(s) to create the minimum opening(s) size.

If the head probe fails to pass completely through the bounded opening, the following steps are required: If necessary, reattach/reposition tray(s) grab bar(s) to the manufacturer's recommended use position, then perform the torso probe test per 7.12.4. Per the manufacturer's instructions, position any adjustable features (that is, calf supports, foot rests, etc.) that may affect the bounded opening(s), to create the maximum opening(s) size.

To prevent head entrapment hazards, the current test under ASTM F833-13b requires the trays or grab bar to be in the manufacturer-recommended use position. This requirement specifies a minimum opening created by the grab bar or tray and foot rest. However, this test may not always capture a hazardous head entrapment opening between an adjustable grab bar and seat that could occur if the grab bar were improperly positioned. For example, a hazardous opening that is larger than the minimum opening may be created by the grab bar and foot rest configuration.

Accordingly, the Commission revises the test method for passive containment/foot opening as follows: Secure the front wheels of the unit in their normal standing position so that the unit cannot move forward. Attach the tray(s) or grab bar(s) in the position that creates the bounded opening(s). Position any adjustable features (that is, grab bar, calf supports, foot rests, etc.) that may affect the bounded opening(s) to create an opening(s) size that is most likely to cause failure.

If the head probe fails to pass completely through the bounded opening, the following steps are required: If necessary, reattach/reposition tray(s) grab bar(s), then perform the torso probe test per 7.12.4. Position any adjustable features (that is, grab bar, calf supports, foot rests, etc.) that may affect the bounded opening(s), to create the opening(s) size that is most likely to cause failure.

The revised wording: “most likely to cause failure” requires the tester to place the adjustable feature, such as a grab bar, if possible, in a position that creates a hazardous opening, thereby causing the stroller to fail, irrespective of the manufacturer’s instructions or the manufacturer’s use position. The test is based on an evaluation of the bounded opening(s) that is/are most likely to create an entrapment hazard and should address the potential for entrapment hazards for multi-positional or adjustable grab bars in strollers.

The commenter also recommended that a car seat adapter that can remain in the stroller be tested for head entrapment. Currently, the Commission is not aware of a car seat adapter that is intended to remain installed in the stroller when the car seat is not used; and the Commission does not have any additional information or data to recommend additional requirements for car seat adapters at this time. However, this issue may be raised in an ASTM subcommittee meeting for further review and discussion.

## **6. Effective Date**

**Comment:** Several comments addressed the effective date of the proposed rule. One commenter supported the proposed 18-month effective date. A second commenter asked the Commission to take a careful look at how much time is needed to bring carriages and strollers into compliance and to make the new rule effective on the earliest practicable date. A third commenter suggested a 12-month effective date. The commenter stated that, given the extended length of time that it took for both the voluntary standard and the proposed rule to reach this point, consumers should not have to wait until late 2015 to see products that meet the standard.

**Response:** In the NPR, the Commission noted that there were significant revisions to the ASTM standard in ASTM F833-13 requiring many modifications to carriages and strollers. Due to the complexity of stroller designs, and to allow time for manufacturers to come into compliance, the

Commission proposed an 18-month effective date. The new performance requirements and test methods adopted in ASTM 833-13 and ASTM 833-13b are extensive and require manufacturers to make fundamental changes to carriages and strollers (*i.e.*, latching mechanism, parking brakes, static load, restraining system, passive containment/foot openings, wheel and swivel assemblies, hinges, and stability/tip over.) Although these requirements were approved in ASTM 833-13 in April, 2013, after the NPR was published, ASTM revised the standard, ASTM 833-13b, on November 1, 2013, to address the scissoring, shearing, and pinching hazards in 2D fold strollers. Now, in the final rule, the Commission requires an additional modification to address head entrapment issues. All of these requirements warrant additional time to allow manufacturers to come into full compliance with the mandatory standard. The Commission believes that 18 months is a reasonable amount of time for manufacturers who will need to redesign products, test new prototype products, and then retool their production processes to meet the considerable modifications that were made in ASTM F833-13 and ASTM F833-13b, plus the additional modification to the passive containment/foot opening test method in the final rule. Moreover, 18 months will reduce the impact on the firms that have product lines that largely or exclusively focus on strollers and stroller accessories. A longer effective date reduces the impact on firms in two ways. First, firms are less likely to experience a lapse in production, which could result if they are unable to comply within the required timeframe. Second, firms could spread costs over a longer time period. For these reasons, the standard for carriages and strollers will become effective 18 months after publication of the final rule.

## **7. Effective Date Marking**



**Comment:** Two commenters stated that products that are manufactured after the effective date of the rule should be marked clearly so that consumers can easily identify products that meet the mandatory standard.

**Response:** A code mark or other means that identifies the date (month and year at a minimum) of manufacture is already required to be on the product under ASTM F833-13b. In addition, a final rule implementing sections 14(a)(2) and 14(i)(2) of the Consumer Product Safety Act (CPSA), as amended by the CPSIA, *Testing and Labeling Pertaining to Product Certification*, 16 CFR part 1107 (the 1107 rule), became effective on February 13, 2013. Under the 1107 rule, a manufacturer or importer may voluntarily label a certified compliant product: “Meets CPSC Safety Requirements.” At this time, the Commission will not require additional markings because ASTM F833-13b already requires the date of manufacture on each product and retail package, and producers may label compliant products as such under the 1107 rule.

## **8. Restraining System/Harness**

**Comment:** One commenter suggested that the Commission require a five-point harness for all strollers and carriages for improved protection to ensure that the child does not move into an unsafe position on his own or due to the stroller being jarred. This commenter also suggested that the Commission look for feasible means of requiring an alert mechanism to indicate whether the harness restraint system is secured properly.

**Response:** Although a five-point harness system may provide extra protection if a stroller tips over, CPSC staff’s review of incident data did not demonstrate that such a system would result in a significant improvement in occupant safety beyond a three-point harness. Moreover, the recent changes to prevent stroller tip over that have been added to ASTM F833-13 and adopted in ASTM F833-13b, such as the new wheel-detachment requirements, should mitigate the

likelihood of tip-over incidents. Accordingly, at this time, the Commission will not require a five-point harness in the standard. In addition, the Commission has insufficient information regarding whether an alert mechanism could be implemented without significantly raising the cost of a stroller, or whether such a system would be effective in reducing incidents involving restraints. However, this issue may be raised for further review and discussion in an ASTM subcommittee meeting.

## **9. Warnings**

**Comment:** To emphasize the risk of entrapment or suffocation to children falling asleep in strollers and other infant products not intended for overnight sleep (but where children often fall asleep), one commenter recommended changing the wording in section 8.2.2 of the standard, which currently states: “Do not leave child unattended” to state instead: “Children have become entrapped or suffocated while sleeping in strollers. Never leave a sleeping child unattended. Move to a crib or safe sleep surface.”

**Response:** The current wording advises the caregiver to attend to the child whether or not he/she is sleeping, thus providing a more generic warning. In most of the incidents where children were reportedly sleeping, the caregiver was also present. CPSC staff’s review of the incident data shows that in one of the fatal incidents, a child was left sleeping in the stroller and was later found entrapped between the seat and tray. In another fatal incident, a child was left sleeping in the infant carrier that was attached to the stroller and found entrapped between the stroller handlebar and foot end of the car seat. The Commission reiterates that children should not be left unattended whether they are sleeping or not. However, the Commission believes that products in which children often fall asleep, such as strollers and hand-held carriers, could benefit from a harmonized and well-designed warning label on the product to educate consumers

to take proper action. Accordingly, the Commission would support CPSC staff's participation in a cross-product ad hoc working group; and should the need arise, the Commission will consider future action, once such a warning label is developed.

**Comment:** Another commenter recommended changing the current wording in section 8.2.2 of ASTM F833-13 from: "The product shall have the following warning statements . . ." to: "The product shall have the following warning statements that address . . ." to provide additional flexibility for manufacturers to alter warnings.

**Response:** The warning statements in sections 8.2.2.2, 8.2.2.3, and 8.2.2.4 already include a provision for manufacturers to insert their own words to describe their restraint system or product-specific instructions. The suggestion would only affect section 8.2.2.1, which includes the warning statement: "Never leave child unattended." The commenter stated that a simple change in wording to: "Never leave *your* child unattended" would not be allowed under 8.2.2. The Commission does not believe that a change to the warnings is warranted, given that the requested word changes would not necessarily increase the effectiveness of the warning. However, this issue may be raised for further review and discussion in a future ASTM subcommittee meeting.

## **G. Final Rule**

The CPSC is incorporating by reference ASTM F833-13b because the Commission's proposed modifications in the NPR have been adopted in ASTM F833-13b, including requirements and test methods to address scissoring, shearing, and pinching hazards associated with 2D fold strollers. However, the Commission is requiring an additional modification to the passive containment/foot opening test method in ASTM F833-13b, to address head entrapment

hazards associated with multi-positional/adjustable grab bars. Specifically, the test method for passive containment/foot opening is revised as follows:

(a) 7.12.1 Secure the front wheels of the unit in their normal standing position so that the unit cannot move forward. Attach the tray(s) or grab bar(s) in the position that creates the bounded opening(s). Position any adjustable features (that is, grab bar, calf supports, foot rests, etc.) that may affect the bounded opening(s) to create an opening(s) size that is most likely to cause failure; and

(b) 7.12.3 If necessary, reattach/reposition tray(s) grab bar(s), then perform the torso probe test per 7.12.4. Position any adjustable features (that is, grab bar, calf supports, foot rests, etc.) that may affect the bounded opening(s), to create the opening(s) size that is most likely to cause failure.

## **H. Effective Date**

The Administrative Procedure Act (APA) generally requires that the effective date of the rule be at least 30 days after publication of the final rule. 5 U.S.C. 553(d). The safety standard for carriages and strollers will become effective 18 months after publication of a final rule in the *Federal Register*.

## **I. Regulatory Flexibility Act**

### **1. Introduction**

The Regulatory Flexibility Act (RFA), 5 U.S.C. 601–612, requires agencies to consider the impact of proposed and final rules on small entities, including small businesses. Section 604 of the RFA requires that the Commission prepare a final regulatory flexibility analysis when promulgating final rules, unless the head of the agency certifies that the rule will not have a significant impact on a substantial number of small entities. The final regulatory flexibility

analysis must describe the impact of the proposed rule on small entities and identify any alternatives that may reduce the impact. Specifically, the final regulatory flexibility analysis must contain:

- a succinct statement of the objectives of, and legal basis for, the rule;
- a summary of the significant issues raised by public comments in response to the initial regulatory flexibility analysis, a summary of the assessment of the agency of such issues, and a statement of any changes made in the proposed rule as a result of such comments;
- a description of, and, where feasible, an estimate of, the number of small entities to which the rule will apply;
- a description of the projected reporting, recordkeeping, and other compliance requirements of the rule, including an estimate of the classes of small entities subject to the requirements and the type of professional skills necessary for the preparation of reports or records; and
- a description of the steps the agency has taken to reduce the significant economic impact on small entities, consistent with the stated objectives of applicable statutes, including a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the rule, and why each one of the other significant alternatives to the rule considered by the agency, which affect the impact on small entities, was rejected.

## **2. Reason for Agency Action**

The Danny Keysar Child Product Safety Notification Act, section 104 of the CPSIA, requires the CPSC to promulgate mandatory standards that are substantially the same as, or more stringent than, the voluntary standard for a durable infant or toddler product. CPSC staff worked closely with ASTM stakeholders to develop the new requirements and test procedures that have

been incorporated into ASTM F833-13b, which together form the basis for the mandatory standard.

### **3. Other Federal Rules**

There are two federal rules that would impact the stroller mandatory standard: (1) Testing and Labeling Pertaining to Product Certification (16 CFR part 1107); and (2) Requirements Pertaining to Third Party Conformity Assessment Bodies (16 CFR part 1112).

The testing and labeling rule (16 CFR part 1107) requires that manufacturers of children's products subject to product safety rules, certify, based on third party testing, that their children's products comply with all applicable safety rules. Because strollers will be subject to a mandatory rule, they will also be subject to the third party testing requirements when the stroller rule becomes effective.

In addition, the 1107 rule requires the third party testing of children's products to be conducted by CPSC-accredited laboratories. Section 14(a)(2) of the Consumer Product Safety Act (CPSA) requires the Commission to publish a notice of requirements (NOR) for the accreditation of third party conformity assessment bodies (*i.e.*, testing laboratories) to test for conformance with each children's product safety rule. These NORs are set forth in 16 CFR part 1112.

### **4. Impact on Small Business**

There are approximately 85 firms that currently supply carriages/strollers in the United States. Under U.S. Small Business Administration (SBA) guidelines, a manufacturer of strollers is considered small if the manufacturer has 500 or fewer employees, and importers and wholesalers are considered small if they have 100 or fewer employees. Based on these guidelines, about 55 are small firms—26 domestic manufacturers, 26 domestic importers, and

three firms with unknown supply sources. There may be additional unknown small stroller suppliers operating in the U.S. market.

### *Small Manufacturers*

The expected impact of the final rule will differ based on whether a firm's strollers are already compliant with ASTM F833-11, the voluntary standard in effect prior to ASTM F833-13. In general, firms whose strollers meet the requirements of ASTM F833-11 are likely to continue to comply with the voluntary standard as new versions are published. Many of these firms are active in the ASTM standard development process, and compliance with the voluntary standard is part of an established business practice. Firms supplying strollers that comply with ASTM F833-11 likely would also comply with F833-13b before the final rule becomes effective.

ASTM F833-13b requirements could require product redesign for at least some strollers that are not compliant with ASTM F833-11 (eight of 26 small domestic manufacturers). Most of the redesign and retooling costs are associated with meeting the requirements of the standard. A redesign would be minor if most of the changes involve adding straps and fasteners or using different mesh or fabric. However, a redesign could be more significant if changes to the frame are required. Due to the complexity of carriages and strollers, a complete redesign of these products, including engineering time, prototype development, tooling, and other incidental costs, could exceed \$1 million for the most complex stroller models. Industry sources, including the Juvenile Products Manufacturers Association (JPMA) note that new tooling alone could exceed \$300,000 per product model. However, costs and development time are likely to vary widely across firms. Companies with substantial experience in manufacturing strollers should be able to complete redesigns more cost effectively than firms with less experience. Additionally, firms

with numerous stroller models may experience lower costs because stroller models could be redesigned as a group.

The modification to the passive containment/foot opening test method may or may not have any impact on small manufacturers because CPSC staff could not identify any strollers on the U.S. market that have adjustable grab bars. Therefore, the direct impact on manufacturers whose products are expected to meet the requirements of ASTM F833-13b (18 of 26 small domestic manufacturers) is not expected to be significant, although it is possible that there are unknown stroller suppliers with products that might be affected.

The 18-month effective date may mitigate the impact on small manufacturers because such firms are less likely to experience a lapse in production, which could result if these firms are unable to comply within the required timeframe, and costs may be spread over a longer period.

In addition, there are indirect impacts. Once the new requirements become effective, all manufacturers will be subject to the additional costs associated with third party testing and certification requirements triggered by the final rule. Those additional third party testing costs will pertain to any physical and mechanical test requirements specified in the stroller final rule; lead and phthalates testing is already required. Third party testing costs could as much as \$800–\$1,000 per model sample.

On average, each small domestic manufacturer supplies seven different models of strollers to the U.S. market annually. Therefore, if third party testing were conducted every year on a single sample for each model, third party testing costs for each manufacturer would be about \$5,600–\$7,000 annually. Based on a review of firm revenues, the impact of third party testing to ASTM F833-13b is unlikely to be significant if only one stroller sample per model is



required. However, the economic impact could be significant for some small firms, if as few as two or three samples per model are required to meet the testing requirements.

### *Small Importers*

In the absence of regulation, small importers of strollers currently in compliance with F833-11 (13 of 26 small domestic importers) would likely continue to comply with the standard as it evolves, including the final mandatory standard. Any increase in production costs experienced by their suppliers may be passed on to them. However, these costs are not likely to be significant, given that CPSC staff could not identify any strollers on the U.S. market that have adjustable grab bars requiring modification.

Small importers of strollers would need to find an alternate source if their existing supplier does not come into compliance with the requirements of ASTM F833-13b. Thirteen importers of strollers currently may not be in compliance with ASTM F833-11. Some importers may discontinue the carriage/stroller product line altogether. The impact of such a decision could be mitigated by replacing the noncompliant stroller with a compliant stroller or by deciding to import an alternative product. However, some of these firms have few or no other products in their product line. Because many of these firms have low sales revenues and limited product lines apart from strollers and stroller accessories, it is possible that the final rule could have a significant impact on one or more importers. The 18-month effective date may mitigate the impact because such firms are less likely to experience a lapse in obtaining compliant strollers, which could result if they are unable to comply within the required timeframe; and costs may be spread over a longer time period.

All importers are also subject to third party testing and certification requirements. Consequently, importers will experience costs similar to those for manufacturers, if their

supplying foreign firm(s) does not perform third party testing. The resulting costs could have a significant impact on a few small importers who must perform the testing themselves, even if only one sample per model were required.

## **5. Alternatives**

One alternative that could reduce the impact on small entities would be to make the voluntary standard mandatory, with no further modifications. However, given that CPSC staff could not identify any strollers on the U.S. market that currently would be impacted by the modification to the passive containment/foot opening test method, this reduction may be insignificant. In addition, incorporating the voluntary standard without modifications would not substantially benefit firms with noncompliant products because their strollers might still require redesign. The 18-month effective date may mitigate the impact because suppliers will have additional time to modify and/or develop compliant strollers and spread the associated costs over a longer period of time. However, the Commission could opt to set a later effective date, which may reduce further the impact on affected firms. A third alternative would be to set an earlier effective date. However, setting an earlier effective date could increase the impact of the rule on small entities, particularly those with limited product lines and low sales revenues.

## **J. Environmental Considerations**

The Commission's regulations address whether we are required to prepare an environmental assessment or an environmental impact statement. These regulations provide a categorical exclusion for certain CPSC actions that normally have "little or no potential for affecting the human environment." Among those actions are rules or safety standards for consumer products. 16 CFR 1021.5(c)(1). The rule falls within the categorical exclusion.

## **K. Paperwork Reduction Act**

This rule contains information collection requirements that are subject to public comment and review by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3521). The preamble to the proposed rule (77 FR 29286) discussed the information collection burden of the proposed rule and specifically requested comments on the accuracy of our estimates. Sections 8 and 9 of ASTM F833-13b contain requirements for marking, labeling, and instructional literature. These requirements fall within the definition of “collection of information,” as defined in 44 U.S.C. 3502(3).

OMB has assigned control number 3041-0164 to this information collection. The Commission did not receive any comments regarding the information collection burden of this proposal. However, the final rule makes modifications regarding the information collection burden because the number of estimated manufacturers subject to the information collection burden is now estimated at 85 manufacturers rather than the 86 manufacturers initially estimated in the proposed rule due to firms entering and exiting the U.S. stroller market. Additionally, the average number of stroller models supplied by all of the firms has increased from six to eight models.

Accordingly, the estimated burden of this collection of information is modified, as follows:

Table 1 – Estimated Annual Reporting Burden

16 CFR Section	Number of Respondents	Frequency of Responses	Total Annual Responses	Hours per Response	Total Burden Hours
1227	85	8	680	1	680

## **L. Preemption**

Section 26(a) of the CPSA, 15 U.S.C. 2075(a), provides that where a consumer product safety standard is in effect and applies to a product, no state or political subdivision of a state may either establish or continue in effect a requirement dealing with the same risk of injury unless the state requirement is identical to the federal standard. Section 26(c) of the CPSA also provides that states or political subdivisions of states may apply to the Commission for an exemption from this preemption under certain circumstances. Section 104(b) of the CPSIA refers to the rules to be issued under that section as “consumer product safety rules,” thus, implying that the preemptive effect of section 26(a) of the CPSA would apply. Therefore, a rule issued under section 104 of the CPSIA will invoke the preemptive effect of section 26(a) of the CPSA when it becomes effective.

#### **M. Certification and Notice of Requirements (NOR)**

Section 14(a) of the CPSA imposes the requirement that products subject to a consumer product safety rule under the CPSA, or to a similar rule, ban, standard or regulation under any other Act enforced by the Commission, must be certified as complying with all applicable CPSC-enforced requirements. 15 U.S.C. 2063(a). Section 14(a)(2) of the CPSA requires that certification of children’s products subject to a children’s product safety rule be based on testing conducted by a CPSC-accepted third party conformity assessment body. Section 14(a)(3) of the CPSA requires the Commission to publish a NOR for the accreditation of third party conformity assessment bodies (or laboratories) to assess conformity with a children’s product safety rule to which a children’s product is subject. The “Safety Standard for Carriages and Strollers,” to be codified at 16 CFR part 1227, is a children’s product safety rule that requires the issuance of an NOR.

The Commission published a final rule, *Requirements Pertaining to Third Party Conformity Assessment Bodies*, 78 FR 15836 (March 12, 2013), which is codified at 16 CFR part 1112 (referred to here as part 1112). This rule became effective on June 10, 2013. Part 1112 establishes requirements for accreditation of third party conformity assessment bodies (or laboratories) to test for conformance with a children's product safety rule in accordance with Section 14(a)(2) of the CPSA. Part 1112 also codifies a list of all of the NORs that the CPSC had published at the time part 1112 was issued. All NORs issued after the Commission published part 1112, such as the standard for carriages and strollers, require the Commission to amend part 1112. Accordingly, this rule amends part 1112 to include the standard for carriages and strollers in the list with the other children's product safety rules for which the CPSC has issued NORs.

Laboratories applying for acceptance as a CPSC-accepted third party conformity assessment body to test to the new standard for carriages and strollers would be required to meet the third party conformity assessment body accreditation requirements in 16 CFR part 1112, *Requirements Pertaining to Third Party Conformity Assessment Bodies*. When a laboratory meets the requirements as a CPSC-accepted third party conformity assessment body, the laboratory can apply to the CPSC to have 16 CFR part 1227, *Safety Standard for Carriages and Strollers*, included in its scope of accreditation of CPSC safety rules listed for the laboratory on the CPSC website at: [www.cpsc.gov/labsearch](http://www.cpsc.gov/labsearch).

CPSC staff conducted an analysis of the potential impacts on small entities of the proposed rule establishing accreditation requirements, as required by the Regulatory Flexibility Act, and the agency prepared an Initial Regulatory Flexibility Analysis (IRFA). *Requirements Pertaining to Third Party Conformity Assessment Bodies*. 77 FR 31086, 31123-26. Specifically,

the NOR for the standard for carriages and strollers would not have a significant adverse impact on small laboratories. Based upon the number of laboratories in the United States that have applied for CPSC acceptance of the accreditation to test for conformance to other juvenile product standards, we expect that only a few laboratories will seek CPSC acceptance of their accreditation to test for conformance with the standard for carriages and strollers. Most of these laboratories already will have been accredited to test for conformance to other juvenile product standards, and the only cost to them would be the cost of adding the standard for carriages and strollers to their scope of accreditation. As a consequence, the Commission certifies that the NOR for the standard for carriages and strollers will not have a significant impact on a substantial number of small entities.

## **List of Subjects**

### **16 CFR Part 1112**

Administrative practice and procedure, Audit, Consumer protection, Reporting and recordkeeping requirements, Third party conformity assessment body.

### **16 CFR Part 1227**

Consumer protection, Imports, Incorporation by reference, Infants and children, Labeling, Law enforcement, and Toys.

For the reasons discussed in the preamble, the Commission amends Title 16 of the Code of Federal Regulations as follows:

## **PART 1112—REQUIREMENTS PERTAINING TO THIRD PARTY CONFORMITY ASSESSMENT BODIES**

1. The authority citation for part 1112 continues to read as follows:

**Authority:** 15 U.S.C. 2063; Pub. L. 110-314, section 3, 122 Stat. 3016, 3017 (2008).

2. Amend § 1112.15 by adding paragraph (b)(36) to read as follows:

**§ 1112.15 When can a third party conformity assessment body apply for CPSC acceptance for a particular CPSC rule and/or test method?**

\* \* \* \* \*

(b) (36) 16 CFR part 1227, Safety Standard for Carriages and Strollers.

\* \* \* \* \*

3. Add part 1227 to read as follows:

**PART 1227-SAFETY STANDARD FOR CARRIAGES AND STROLLERS**

Sec.

1227.1 Scope.

1227.2 Requirements for carriages and strollers.

**Authority:** The Consumer Product Safety Improvement Act of 2008, Pub. L. 110-314, § 104, 122 Stat. 3016 (August 14, 2008); Pub. L. 112-28, 125 Stat. 273 (August 12, 2011).

**§ 1227.1 Scope.**

This part establishes a consumer product safety standard for carriages and strollers.

**§ 1227.2 Requirements for carriages and strollers.**

(a) Except as provided in paragraph (b) of this section, each carriage and stroller must comply with all applicable provisions of ASTM F833-13b, *Standard Consumer Safety Performance Specification for Carriages and Strollers*, approved on November 1, 2013. The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You may obtain a copy from ASTM International, 100 Bar Harbor Drive, P.O. Box 0700, West Conshohocken, PA 19428; <http://www.astm.org/cpsc.htm>. You may inspect a copy at the Office of the Secretary, U.S. Consumer Product Safety

Commission, Room 820, 4330 East West Highway, Bethesda, MD 20814, telephone 301-504-7923, or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:

[http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

(b) Comply with ASTM F833-13b standard with the following changes:

(1) Instead of complying with section 7.12.1 of ASTM F833-13b, comply with the following:

(i) 7.12.1 Secure the front wheels of the unit in their normal standing position so that the unit cannot move forward. Attach the tray(s) or grab bar(s) in the position that creates the bounded opening(s). Position any adjustable features (that is, grab bar, calf supports, foot rests, etc.) that may affect the bounded opening(s) to create an opening(s) size that is most likely to cause failure.

(ii) [Reserved]

(2) Instead of complying with section 7.12.3 of ASTM F833-13b, comply with the following:

(i) 7.12.3 If necessary, reattach/reposition tray(s) grab bar(s), then perform the torso probe test per 7.12.4. Position any adjustable features (that is, grab bar, calf supports, foot rests, etc.) that may affect the bounded opening(s), to create the opening(s) size that is most likely to cause failure.

(ii) [Reserved]

Dated: March 5, 2014

Todd A. Stevenson,  
Secretary, Consumer Product Safety Commission



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